

1       **In the Claims**

2       Claims 4, 25, 33, 53 and 80 have been canceled.

3       Claims 1, 5, 22, 26, 30, 34, 50, 54, and 77 have been amended.

4       Claims 1-3, 5-24, 26-32, 34-52, 554-79 remain in the application and are  
5 listed below:

6  
7       1.     (Currently Amended) A method of determining the context of a  
8 computing device comprising:

9             determining whether any of a number of context providers are available to  
10 provide context information that can be processed by the computing device to  
11 ascertain its context;

12            receiving context information from one or more of the context providers  
13 that are determined to be available; and

14            processing the context information on the computing device to determine  
15 the context of the computing device, wherein the processing of the information  
16 comprises:

17               mapping the context information to a node on a hierarchical tree  
18               structure that is carried on the device, the hierarchical tree structure  
19               comprising multiple nodes that represent physical or logical entities; and  
20               traversing one or more nodes of the tree structure to ascertain a  
21               complete context.

22  
23       2.     (Original) The method of claim 1, wherein the computing device is a  
24 mobile computing device.  
25

1           3.     (Original) The method of claim 1, wherein the computing device is a  
2 handheld mobile computing device.

3  
4           4.     (Canceled).

5  
6           5.     (Currently Amended) The method of claim [[4]] 1, wherein the  
7 traversing comprises traversing multiple hierarchical tree structures that are  
8 carried on the device.

9  
10          6.     (Original) The method of claim 5, wherein the tree structures are  
11 linked.

12  
13          7.     (Original) The method of claim 5, wherein one of the tree structures  
14 comprises nodes that represent geographical divisions of the Earth.

15  
16          8.     (Original) The method of claim 5, wherein one of the tree structures  
17 comprises nodes that represent geographical divisions of the Earth, and another of  
18 the tree structures comprises nodes that represent an organization-specific  
19 structure.

20  
21          9.     (Original) The method of claim 1, wherein the computing device is  
22 configured to determine whether any of the number of context providers are  
23 available.

1           10.    (Original) The method of claim 1, wherein the computing device is  
2 configured to determine whether any of the number of context providers are  
3 available by polling one or more of the context providers.  
4

5           11.    (Original) The method of claim 1, wherein the computing device is  
6 configured to receive events that pertain to the status of the context providers.  
7

8           12.    (Original) The method of claim 1 further comprising using a  
9 previously determined current context if no context providers are determined to be  
10 available.  
11

12           13.    (Original) The method of claim 12 further comprising decreasing,  
13 over time, a confidence parameter associated with the previously determined  
14 current context, the confidence parameter providing a measure of the confidence  
15 associated with the previously determined current context.  
16

17           14.    (Original) The method of claim 12 further comprising continuing to  
18 determine whether any of a number of context providers are available.  
19

20           15.    (Original) The method of claim 14, wherein the using of the  
21 previously determined current context can continue until one or more context  
22 providers are determined to be available.  
23

24           16.    (Original) The method of claim 1, wherein the processing of the  
25 context information comprises ordering the context providers in accordance with a

1 trust parameter that is assigned to each context provider and defines a level of trust  
2 associated with the context provider.

3  
4 17. (Original) The method of claim 16 further comprising determining  
5 whether there are any conflicts with the context information and, if so, selecting  
6 only context information from certain ordered context providers.

7  
8 18. (Original) The method of claim 1, wherein the processing of the  
9 context information comprises ordering the context providers in accordance with a  
10 confidence parameter that provides a measure of a context provider's confidence  
11 in its context information.

12  
13 19. (Original) The method of claim 18 further comprising determining  
14 whether there are any conflicts with the context information and, if so, selecting  
15 only context information from certain ordered context providers.

16  
17 20. (Original) The method of claim 1, wherein the processing of the  
18 context information comprises ordering the context providers in accordance with a  
19 trust parameter that is assigned to each context provider and defines a level of trust  
20 associated with the context provider, and a confidence parameter that provides a  
21 measure of a context provider's confidence in its context information.

22  
23 21. (Original) The method of claim 20 further comprising determining  
24 whether there are any conflicts with the context information and, if so, selecting  
25 only context information from certain ordered context providers.

1  
2 22. (Currently Amended) One or more computer-readable media having  
3 computer-readable instructions thereon which, when executed by a computing  
4 device, cause the computing device to:

5 determine whether any of a number of context providers are available to  
6 provide context information that can be processed by the computing device to  
7 ascertain its context;

8 receive context information from one or more of the context providers that  
9 are determined to be available; and

10 process the context information on the computing device to determine the  
11 context of the computing device by:

12 mapping the context information to a node on a hierarchical tree  
13 structure that is carried on the device, the hierarchical tree structure  
14 comprising multiple nodes that represent physical or logical entities; and  
15 traversing one or more nodes of the tree structure to ascertain a  
16 complete context.

17  
18 23. (Original) The computer-readable media of claim 22, wherein the  
19 computing device comprises a mobile computing device.

20  
21 24. (Original) The computer-readable media of claim 22, wherein the  
22 computing device comprises a handheld mobile computing device.

23  
24 25. (Canceled).

1           26.   (Currently Amended) The computer-readable media of claim [[25]]  
2   22, wherein the traversing comprises traversing multiple hierarchical tree  
3   structures that are carried on the device.

4  
5           27.   (Original) The computer-readable media of claim 26, wherein the  
6   tree structures are linked.

7  
8           28.   (Original) The computer-readable media of claim 26, wherein one of  
9   the tree structures comprises nodes that represent geographical divisions of the  
10   Earth.

11  
12          29.   (Original) The computer-readable media of claim 26, wherein one of  
13   the tree structures comprises nodes that represent geographical divisions of the  
14   Earth, and another of the tree structures comprises nodes that represent an  
15   organization-specific structure.

16  
17          30.   (Currently Amended) A method of determining the location of a  
18   computing device comprising:

19           determining whether any of a number of location providers are available to  
20   provide location information that can be processed by the computing device to  
21   ascertain its location;

22           receiving location information from one or more of the location providers  
23   that are determined to be available; and

1 processing the location information on the computing device to determine  
2 the location of the computing device, wherein the processing of the information  
3 comprises:

4 mapping the location information to a node on a hierarchical tree  
5 structure that is carried on the device, the hierarchical tree structure  
6 comprising multiple nodes that represent physical or logical entities; and  
7 traversing one or more nodes of the tree structure to ascertain a  
8 complete location.

9  
10 31. (Original) The method of claim 30, wherein the computing device  
11 comprises a mobile computing device.

12  
13 32. (Original) The method of claim 30, wherein the computing device  
14 comprises a handheld mobile computing device.

15  
16 33. (Canceled).

17  
18 34. (Currently Amended) The method of claim ~~[[33]]~~ 30, wherein the  
19 traversing comprises traversing multiple hierarchical tree structures that are  
20 carried on the device.

21  
22 35. (Original) The method of claim 34, wherein the tree structures are  
23 linked.

1           36. (Original) The method of claim 34, wherein one of the tree  
2 structures comprises nodes that represent geographical divisions of the Earth.

3  
4           37. (Original) The method of claim 34, wherein one of the tree  
5 structures comprises nodes that represent geographical divisions of the Earth, and  
6 another of the tree structures comprises nodes that represent an organization-  
7 specific structure.

8  
9           38. (Original) The method of claim 30, wherein the computing device is  
10 configured to determine whether any of the number of location providers are  
11 available.

12  
13           39. (Original) The method of claim 30, the computing device is  
14 configured to determine whether any of the number of location providers are  
15 available by polling one or more of the location providers.

16  
17           40. (Original) The method of claim 30 further comprising using a  
18 previously determined current location if no location providers are determined to  
19 be available.

20  
21           41. (Original) The method of claim 40, further comprising decreasing,  
22 over time, a confidence parameter associated with the previously determined  
23 current location, the confidence parameter providing a measure of the confidence  
24 associated with the previously determined current location.



1           42.    (Original) The method of claim 40 further comprising continuing to  
2 determine whether any of a number of location providers are available.

3  
4           43.    (Original) The method of claim 42, wherein the using of the  
5 previously determined current location can continue until one or more location  
6 providers are determined to be available.

7  
8           44.    (Original) The method of claim 30, wherein the processing of the  
9 location information comprises ordering the location providers in accordance with  
10 a trust parameter that is assigned to each location provider and defines a level of  
11 trust associated with the location provider.

12  
13          45.    (Original) The method of claim 44 further comprising determining  
14 whether there are any conflicts with the location information and, if so, selecting  
15 only location information from certain ordered location providers.

16  
17          46.    (Original) The method of claim 30, wherein the processing of the  
18 location information comprises ordering the location providers in accordance with  
19 a confidence parameter that provides a measure of a location provider's  
20 confidence in its location information.

21  
22          47.    (Original) The method of claim 46 further comprising determining  
23 whether there are any conflicts with the location information and, if so, selecting  
24 only location information from certain ordered location providers.

1           48.   (Original) The method of claim 30, wherein the processing of the  
2 location information comprises ordering the location providers in accordance with  
3 a trust parameter that is assigned to each location provider and defines a level of  
4 trust associated with the location provider, and a confidence parameter that  
5 provides a measure of a location provider's confidence in its location information.  
6

7           49.   (Original) The method of claim 48 further comprising determining  
8 whether there are any conflicts with the location information and, if so, selecting  
9 only location information from certain ordered location providers.  
10

11           50.   (Currently Amended) One or more computer-readable media having  
12 computer-readable instructions thereon which, when executed by a computing  
13 device, cause the computing device to:

14               determine whether any of a number of location providers are available to  
15 provide location information that can be processed by the computing device to  
16 ascertain its location;

17               receive location information from one or more of the location providers that  
18 are determined to be available; and

19               process the location information on the computing device to determine the  
20 location of the computing device by:

21                       mapping the context information to a node on a hierarchical tree  
22                       structure that is carried on the device, the hierarchical tree structure  
23                       comprising multiple nodes that represent physical or logical entities; and  
24                       traversing one or more nodes of the tree structure to ascertain a  
25                       complete context.

1  
2 51. (Original) The computer-readable media of claim 50, wherein the  
3 computing device comprises a mobile computing device.  
4

5 52. (Original) The computer-readable media of claim 50, wherein the  
6 computing device comprises a handheld mobile computing device.  
7

8 53. (Canceled).  
9

10 54. (Currently Amended) The computer-readable media of claim [[53]]  
11 50, wherein the traversing comprises traversing multiple hierarchical tree  
12 structures that are carried on the device.  
13

14 55. (Original) The computer-readable media of claim 54, wherein the  
15 tree structures are linked.  
16

17 56. (Original) The computer-readable media of claim 54, wherein one of  
18 the tree structures comprises nodes that represent geographical divisions of the  
19 Earth.  
20

21 57. (Original) The computer-readable media of claim 54, wherein one of  
22 the tree structures comprises nodes that represent geographical divisions of the  
23 Earth, and another of the tree structures comprises nodes that represent an  
24 organization-specific structure.  
25

1           58.    (Original) A computing device that embodies the computer-readable  
2 medium of claim 50.

3  
4           59.    (Original) A computing device that embodies the computer-readable  
5 medium of claim 53.

6  
7           60.    (Original) A computing device that embodies the computer-readable  
8 medium of claim 54.

9  
10          61.    (Original) A computing device that embodies the computer-readable  
11 medium of claim 55.

12  
13          62.    (Original) A computing device that embodies the computer-readable  
14 medium of claim 56.

15  
16          63.    (Original) A computing device that embodies the computer-readable  
17 medium of claim 57.

18  
19          64.    (Original) A mobile computing device that embodies the computer-  
20 readable medium of claim 50.

21  
22          65.    (Original) A mobile computing device that embodies the computer-  
23 readable medium of claim 53.

1           66.   (Original) A mobile computing device that embodies the computer-  
2 readable medium of claim 54.

3  
4           67.   (Original) A mobile computing device that embodies the computer-  
5 readable medium of claim 55.

6  
7           68.   (Original) A mobile computing device that embodies the computer-  
8 readable medium of claim 56.

9  
10          69.   (Original) A mobile computing device that embodies the computer-  
11 readable medium of claim 57.

12  
13          70.   (Original) A method of determining a current context of a computing  
14 device comprising:

15               determining a current context of the device by:

16                     receiving context information from multiple different context  
17 providers;

18                     mapping the context information to a node of a hierarchical tree  
19 structure that is carried by the device and having multiple nodes each of which  
20 represent a physical or logical entity; and

21                     traversing the hierarchical tree structure to ascertain a complete  
22 device context;

23                     receiving additional context information from one or more context  
24 providers; and

25               updating the current context of the device by:

1 mapping the context information to a node of the hierarchical tree  
2 structure that is carried by the device; and  
3 traversing the hierarchical tree structure to ascertain a complete  
4 device context.

5  
6 71. (Original) The method of claim 70 further comprising determining  
7 whether there are any conflicts in the additional context information and, if so,  
8 resolving the conflicts prior to updating the current context of the device.

9  
10 72. (Original) The method of claim 71, wherein conflicts are resolved on  
11 the basis of a trust parameter that is associated with each of the context providers.

12  
13 73. (Original) The method of claim 71, wherein conflicts are resolved on  
14 the basis of physical world constraints to travel.

15  
16 74. (Original) The method of claim 70, wherein the context comprises  
17 location.

18  
19 75. (Original) The method of claim 74, wherein the device is a hand-  
20 held device.

21  
22 76. (Original) One or more computer-readable media having computer-  
23 readable instructions thereon which, when executed by the computing device,  
24 cause the computing device to implement claim 70.  
25

1           77.   (Currently Amended) A computing device comprising:  
2           a computer-readable medium; and  
3           a context service module on the computer-readable medium and configured  
4   to process information from multiple different context providers to determine a  
5   current device context, the context service module being configured to:  
6           determine whether any of a number of context providers are  
7   available to provide context information that can be processed by the computing  
8   device to ascertain its context;  
9           receive context information from one or more of the context providers that  
10   are determined by the device to be available; and  
11          process the context information on the computing device to determine the  
12   context of the computing device by:  
13          mapping the context information to a node on a hierarchical tree  
14          structure that is carried on the device, the hierarchical tree structure  
15          comprising multiple nodes that represent physical or logical entities; and  
16          traversing one or more nodes of the tree structure to ascertain a  
17          complete context.

18  
19          78.   (Original) The computing device of claim 77 embodied as a mobile  
20   computing device.

21  
22          79.   (Original) The computing device of claim 77 embodied as a  
23   handheld computing device.

24  
25          80.   (Canceled).